

Table 1: SCO Matrix/Technical Considerations

Courtesy of Kelly Clark, CO.

Consideration	SPL	FreeWalk	UTX Swing	SCOKJ, Motion Activated	SCOKJ, Weight Activated	E-Knee	SensorWalk	FullStride
Weight Limit	None for dblupright	80/120kg	80/120kg	125kg	125kg	100kg	136kg	100kg
Axial Weight Bearing?	No	No	No	Caution	Caution	No	Yes	No
Hip Flexion Contracture OK?	Minimal only	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hip Flexion Required [MMT]	3	3	None	None	None	None	3	None
Hip Extension Required [MMT]	None	3	3	None	None	None	None	None
Manage Knee Flexion Contracture	<10°	<10°	<5°	<10°	<10°	<10°	≤15°	≤10° w/preflexed uprights
Manage Knee Varus Thrust	No	No	No	Yes	Yes	Yes	Yes	Yes
Manage Knee Valgus Thrust	No	No	Yes, FS type <10°	Yes	Yes	Yes	Yes	Yes
Manage Ankle Instability	Yes	If controlled by FO	Yes	Yes	Yes	Yes	Yes	Yes
Passive Ankle Motion Required	None	10°	3°	3°	None	None	None	3–5°
Manage Ankle Spasticity	Yes	No	No	No	Yes	Perhaps	Yes, solid ankle	Yes
Can Function as a KO	Yes	No	No	No	No	Yes, wire to inlay	Yes, wire to foot sensor	No
Single Bar System	Yes (100kg) 2 hip ext. or 2 PF	Always, lat only	Always, lat only	Yes, (61kg)	Yes, (61kg)	Never	Yes (weight TBD)	Yes, selectively
Locking Mechanism	Pawl	Hammer	Sear	Cam	Cam	Gear Clutch	Wrap Spring Clutch	Hammer & Sear
Actuation [w/KE Moment]	Joint angle	Ankle motion	Ankle motion	Ankle motion	Weight bearing	Weight bearing	No KE moment needed	No KE moment needed
Stance Control Initiation	Full KE in TSw	Full KE in TSw	Full KE in TSw	3° ankle motion	Hindfoot contact	Foot contact	Mid-swing	Full extension
Stance Control Release	Hip ext. angle	10° DF + KE moment	3° DF + KE moment	3° DF + KE moment	Heel off + KE moment	No sensor signal + KE moment	Foot sensor unload. No KE needed	Ankle DF
Free Swing Mode	No	No	No	Yes	Yes	No	Yes	No
Manual Unlock Mode	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Manual Lock Mode	Yes	No	No	Yes	Yes	Power off	Power off	No
Full Knee Joint Extension Necessary	Yes	Yes	Yes	No	No	No	No	Yes
Stable in Any Knee Flexion	No	No	No	Yes	Yes	Yes	Yes	No
Permits KE w/Stance Control	No	No	No	Yes	Yes	Yes	Yes	No
Required Equipment	None	Starter kit	None	None	None	None	None	None
Alignment Fixture	Optional	Not available	Not available	Optional	Optional	Optional	Not needed C-Fab	Optional
Casting Attitude	5° extra KF	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
C-Fab Available	Yes	Required	Required	Yes	Yes	Yes	Required	Yes
Fabricate in Your Lab	Yes	No	No	Yes	Yes	Yes	No	Yes
Reshape in Your Lab	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Service Interval	6 months	12 months	12 months	3M steps	3M steps	12 months	12 months	12 months
Warranty on Fab	---	90 days	12 months	Varies	Varies	12 months	90 days	12 months
Warranty on Parts	12 months	12 months	---	12 months	12 months	12 months	12 months	12 months